

REMARKS

Claims 1, 33, 57, 76 and 130 have been amended. No new matter has been included. Claims 52 and 53 were previously canceled. Claims 1-51 and 54-172 are currently pending in the present application.

Claims 1-51, 54-88 and 112-129 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 76-87 of copending Application No. 10/819315. Application No. 10/819315 is pending at this time and its claims, as well as those in the present application, are subject to change, thus Applicant does not respond to this rejection at this time. However, Applicant reserves the right to respond to the rejection if necessary when it is no longer a "provisional" rejection.

Claims 1-51 and 54-172 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 30-137 of copending Application No. 10/120521 in view of Campbell et al. (U.S. Patent No. 6,813,178, "Campbell"). Application No. 10/120521 is pending at this time and its claims, as well as these in the present application, are subject to change, thus Applicant does not respond to this rejection at this time. However, Applicant reserves the right to respond to the rejection if necessary when it is no longer a "provisional" rejection.

Claims 130-147 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 130-147 of U.S. Patent No. 6,867,996 (the '996 patent) in view of Campbell. This rejection is respectfully traversed.

The attached Declarations of John T. Moore, Terry L. Gilton, Joseph F. Brooks and Kristy A. Campbell pursuant to 37 C.F.R. § 1.132 ("the Declarations") are submitted as evidence and proof that the invention disclosed in the Campbell reference and relied upon by the Examiner is not an invention "by another." "A showing that the reference disclosure arose from applicant's work coupled with a showing of conception by the applicant before the filing date of the reference will overcome the 35 U.S.C. 102(e) rejection." M.P.E.P. §2136.05.

The examiner relies upon FIG. 1b of the Campbell reference which notes that the structure shown in FIG. 1 can be operated as a PCRAM memory device. However, the Campbell reference claims only constant current devices. The Declarations establish that the structure shown in FIG. 1b of the Campbell reference as it relates to a memory element or device was derived from the invention of Kristy A. Campbell, the inventor of this application. Further, the Declarations establish that Kristy A. Campbell conceived of memory elements and devices having the structure shown in FIG. 1b of the Campbell reference prior to March 12, 2003, the filing date of the Campbell reference. Accordingly, Campbell is not a proper 35 U.S.C. 102(e) reference and all rejections based thereon should be withdrawn. *See, In re Mathews*, 408 F.2d 1393 (CCPA 1969); *In re Land*, 368 F.2d 866 (CCPA 1966).

Claims 112-129 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 71 of copending Application No. 10/800707 in view of Campbell. Application No. 10/800707 is pending at this time and its claims, as well as the claims of the present application, are subject to change, thus Applicant does not respond to this rejection at this time.

However, Applicant reserves the right to respond to the rejection if necessary when it is no longer a "provisional" rejection.

Claims 1-56 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 30 of copending Application No. 10/410567 in view of Campbell. Application No. 10/410567 is pending at this time and its claims, as well as those of the present application, are subject to change, thus Applicant does not respond to this rejection at this time. However, Applicant reserves the right to respond to the rejection if necessary when it is no longer a "provisional" rejection.

Claims 1-5, 9-11, 15-21, 23, 25-27, 29-31, 33, 34, 38-42, 46, 47, 49-51, 54, 55, 57-60, 64, 68, 70-74, 76-80, 84-87, 112-120, 124, 125, 127, 128, 130-135, 137, 139, 140, 144 and 145-147 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Campbell. The rejection is respectfully traversed.

As discussed above, Campbell is not a proper reference. Therefore, Applicant respectfully requests that this rejection be withdrawn.

Claims 1-3, 9, 10, 15, 23, 25, 26, 30, 32, 130-135, 137, 139 and 144-146 stand rejected under 35 U.S.C. § 102(a) as being anticipated by Moore (U.S. Publication No. 2003/0038301)("Moore"). The rejection is respectfully traversed.

Amended independent claim 1 recites "a resistance variable memory element," comprising, *inter alia*, "a plurality of layers configured to maintain a resistance state set by a programming voltage applied across said plurality of layers." Claim 1 further recites that the plurality of layers comprises "at least one chalcogenide glass layer, at least one metal-containing layer, at least one silver layer provided

adjacent to said metal-containing layer, and at least one other glass layer, said at least one metal-containing layer and said at least one silver layer being provided between said at least one chalcogenide glass layer and said at least one other glass layer.”

Similarly, as amended, independent claim 130 recites a “processor based system” comprising, *inter alia*, a “memory circuit including a resistance variable memory element comprising a plurality of layers configured to maintain a resistance state set by a programming voltage applied across said plurality of layers.” Claim 130 further recites that the plurality of layers comprises “at least one metal-containing layer, at least one silver layer in contact with said at least one metal-containing layer, at least one chalcogenide glass layer, at least one other glass layer, said metal-containing layer and said silver layer being provided between said at least one chalcogenide glass layer and said at least one other glass layer.”

Moore does not disclose at least these limitations. Instead, Moore discloses two individual memory cells that are stacked one over the other with a common anode between them to form an upper and lower memory cell pair. Moore at page 1, paragraph 15. Each one of Moore’s stacked cells includes layers that are set to a resistance state by a programming voltage applied across only the layers of a single cell. However, Moore does not disclose that a programming voltage is applied across all layers of both cells to set the layers of both cells to a resistance state. Instead, each individual cell of Moore is configured to be individually set by a programming voltage to its own resistance state. Moore at Abstract. Thus, the portion of Moore’s stack cited by the Examiner, which includes both memory cells, is not “a plurality of layers configured to maintain a resistance state set by a programming voltage applied across said plurality of layers,” as recited by amended claims 1 and 130. Additionally, a single

memory cell of Moore does not include the plurality of layers recited by claims 1 and 130.

Further, the above noted limitations of claims 1 and 130 structurally distinguish the claimed invention over the prior art and are not merely a recitation of intended use. The term "configured" relates to and further defines the structure or configuration of the plurality of layers. For at least these reasons, withdrawal of this rejection is respectfully requested.

Claims 1, 22, 130 and 138 stand rejected under 35 U.S.C. § 102(a) as being anticipated by Moore based on an alternate interpretation. The rejection is respectfully traversed.

Even under the Examiner's alternative interpretation of Moore, the portion of Moore's stack cited by the Examiner includes both memory cells, which can maintain different resistance states. Therefore, as discussed above, the portion is not "a plurality of layers configured to maintain a resistance state set by a programming voltage applied across said plurality of layers," as recited by amended claims 1 and 130. For at least these reasons, withdrawal of this rejection is respectfully requested.

Claims 16-21, 27, 28, 31 and 147 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Moore. The rejection is respectfully traversed.

As discussed above, Moore fails to disclose, teach or suggest all limitations of amended claims 1 and 130 under either of the interpretations set forth by the Examiner. Accordingly, Moore does not render these claims, or any claims depending therefrom, obvious. For at least these reasons, withdrawal of this rejection is respectfully requested.

Application No.: 10/622,482
Amendment dated November 30, 2005
Reply to Office action dated June 30, 2005

Docket No.: M4065.0724/P724

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Dated: November 30, 2005

Respectfully submitted,

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Attachments